

§Appl. No. 10/017,393  
Amdt. dated March 21, 2005  
Reply to Office Action of, December 23, 2004

**Listing of Claims:**

**Claim 1 (Previously Presented)** An isolated human H2R polynucleotide which codes without interruption for an amino acid sequence set forth in SEQ ID NO 2, or a complete complement thereto.

**Claim 2 (Currently Amended)** An isolated human H2R polynucleotide comprising, a polynucleotide sequence having 95% or more sequence identity along the entire length of the polynucleotide sequence from nucleotide positions 103-1368 as set forth in SEQ ID NO 1 and which codes without interruption for H2R, or a complete complement thereto, wherein said polynucleotide hybridizes under high stringency conditions comprising 5X SSC, 0.5% SDS, 100 µg/ml denatured salmon sperm DNA and 50% formamide, at 42°C to the complete complement of the sequence set forth in SEQ ID NO:1, and wherein said polynucleotide codes for a polypeptide that, upon activation by histamine, leads to the accumulation of cAMP.

**Claim 3 (Currently Amended)** An isolated H2R polynucleotide, comprising: a polynucleotide coding for amino acids 360-422 of SEQ ID NO 2, or a polynucleotide fragment thereof comprising at least 25 nucleotides, specific fragments thereof which hybridize specifically under high stringent conditions to the polynucleotide sequence from nucleotide positions 1180-1368 as set forth in SEQ ID NO:1, or complete complements thereto, wherein said fragment can be used as a polymerase chain reaction primer.

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**Claim 4 (Previously Presented)** An isolated H2R polynucleotide of claim 3, consisting of: a polynucleotide coding for amino acids 360-422 of SEQ ID NO 2, or a complete complement thereto.

**Claim 5 (Cancelled)**

**Claim 6 (Cancelled)**

**Claim 7 (Cancelled)**

**Claim 8 (Cancelled)**

**Claim 9 (Cancelled)**

**Claim 10 (Cancelled)**

**Claim 11 (Cancelled)**

**Claim 12 (Cancelled)**

**Claim 13 (Previously Presented)** An isolated transformed mammalian cell comprising: a polynucleotide construct comprising a human H2R polynucleotide of claim 2 operatively linked to an expression control sequence.

**Claim 14 (Currently Amended)** An isolated transformed cell of claim 13, wherein said human H2R polynucleotide has the polynucleotide sequence from nucleotides 103-1368 as sequence set forth in SEQ ID 1.

**Claim 15 (Previously Presented)** An isolated transformed cell of claim 13, wherein said human H2R polynucleotide has the amino acid sequence set forth in SEQ ID 2.

**Claim 16 (Previously Presented)** An isolated transformed cell of claim 13, wherein said expressible human H2R polynucleotide is integrated into the chromosome of said cell.

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**Claim 17 (Cancelled)**

**Claim 18 (Previously Presented)** An isolated human H2R polynucleotide of claim 1, comprising the polynucleotide sequence from nucleotide positions 103-1368 as set forth in SEQ ID NO:1, or a complete complement thereto.

**Claim 19 (Currently Amended)** An isolated H2R polynucleotide of claim 13, wherein said polynucleotide comprises the polynucleotide sequence from nucleotide positions 1180-1368 as set forth in SEQ ID NO:1.

**Claim 20 (New)** A method of producing a human H2R polynucleotide, comprising:  
comprising expressing a polynucleotide of claim 1 operatively linked to an expression control sequence under conditions effective to achieve production of said H2R coded for by said polynucleotide.

**Claim 21 (New)** A method of producing a human H2R polynucleotide, comprising:  
comprising expressing a polynucleotide of claim 2 operatively linked to an expression control sequence under conditions effective to achieve production of said H2R coded for by said polynucleotide.

**Claim 22 (New)** A method of producing a human H2R polynucleotide, comprising:  
comprising expressing a polynucleotide of claim 18 operatively linked to an expression control sequence under conditions effective to achieve production of said H2R coded for by said polynucleotide.

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**Claim 23 (New)** A method of producing a human H2R polynucleotide, comprising:  
comprising expressing a polynucleotide of claim 19 operatively linked to an expression control sequence under conditions effective to achieve production of said H2R coded for by said polynucleotide.